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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/768,690	01/24/2001	Louise C. Sengupta	283014-00029	3904

27512 7590 12/16/2003  
WILLIAM J. TUCKER  
8650 SOUTHWESTERN BLVD. #2825  
DALLAS, TX 75206

EXAMINER

BRUNSMAN, DAVID M

ART UNIT	PAPER NUMBER
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1755

DATE MAILED: 12/16/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Applicant(s)

09/768,690

Applicant(s)

SENGUPTA ET AL.

Examiner

David M Brunsman

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-- The MAILING DATE of this communication appears on the cover sheet with the corresponding address.

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-8, 10, 11 and 13-23 is/are pending in the application.
- 4a) Of the above claim(s) 14 and 17 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-8, 10, 11, 13, 15, 16 and 18-23 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☒ Claim(s) 1-8, 10, 11 and 13-23 are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. §§ 119 and 120**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
- a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_.

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Applicant's response filed 21 November 2003 has been carefully considered. The Obviousness type double patenting rejection made in the previous office action is withdrawn in view of the Terminal Disclaimer filed. Claims 9, 12 and 24-48 have been cancelled. Claims 1-8, 10, 11 and 13-23 are pending. Applicant most recent amendment has effectively cancelled the species comprising BSTO, MgO and a trivalent rare earth oxide. Inventions limited to the combination BSTO, MgO and  $\text{Mg}_2\text{SiO}_4$  remain allowable over the prior art of record. The scope of search and examination is again expanded to include combinations of BSTO, MgO and  $\text{SiO}_2$ . Claims 14 and 17 are withdrawn from further consideration as being directed to a nonelected species.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-5, 10, 11, 13, 15, 16 and 18-23 are rejected under 35 U.S.C. 102(b) as being anticipated by US Patent 5427988.

The reference teaches electronically tunable dielectric materials comprising BSTO and MgO and explicitly discloses at column 6, lines 14-24, that addition of a further component such as silicon dioxide falls within the scope of the invention. As a single prior art reference includes a specific teaching to add the second additive to the combination of BSTO and MgO, it is anticipatory of the instant claims. The similar materials employed would be expected to exhibit similar tunability properties.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-8, 10, 11, 13, 15, 16 and 18-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent 5427988.

The claims of the reference teach a combination of 70% BSTO and 30% MgO wherein the "x" ration is 0.35-0.40. The similar materials employed would be expected to exhibit similar tunability properties. The difference between the claims of the prior art reference and the instant claims is the further addition of a metal oxide phase such as silicon dioxide. At column 6, lines 14-24, of the reference the same inventor as the instant application states on the record: "it will be obvious to those skilled in the art" to add another low dielectric constant material such as silicon dioxide. It would have been obvious to one of ordinary skill in the art to add silicon dioxide to the combination of the reference claims because the reference itself states that it would.

US Patents 5312790, 5486491 and 5635434 include statements by the instant inventor that addition second metal oxide phases to other combinations of the instant claims falls within the level of ordinary skill in the art.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant

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to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

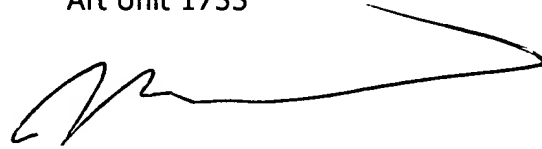
Any inquiry concerning this communication or earlier communications from the examiner should be directed to David M Brunsman whose telephone number is 571-272-1365. The examiner can normally be reached on M, W, F, Sa; 6:00-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark Bell can be reached on 571-272-1362. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.

David M Brunsman  
Primary Examiner  
Art Unit 1755

DMB

A handwritten signature in black ink, appearing to be 'DMB', with a long horizontal line extending to the right.